

**Amendments to the Claims:**

The listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (currently amended) An electrochemical cell comprising a cathode, an anode and an electrolyte, wherein:

the anode comprises mesoporous titanium dioxide or a mesoporous lithium titanate; and

the electrolyte comprises an aqueous solution containing lithium and hydroxide ions; and

the cathode is formed of a mesoporous material selected from the group consisting of nickel, a nickel oxide, a nickel hydroxide, a nickel oxy-hydroxide and combinations thereof.

2. canceled

3. (currently amended) A cell according to Claim 1-2, in which the mesoporous titanium dioxide or lithium titanate has a periodic arrangement of substantially uniformly sized pores of cross-section of the order of  $10^{-8}$  to  $10^{-9}$  m.

4 - 7 canceled

8. (currently amended) A cell according to Claim 1-2-or-4, in which the mesoporous structure of the cathode and/or anode has a pore diameter within the range from 1 to 10 nm.

9. (currently amended) A cell according to Claim 1-2-or-4, in which the mesoporous structure of the cathode and/or anode has a pore number density of from  $4 \times 10^{11}$  to  $3 \times 10^{13}$  pores per  $\text{cm}^2$ .

10. (currently amended) A cell according to Claim 1 2-or-4, in which at least 85% of the pores in the mesoporous structure of the cathode and/or anode have pore diameters to within 30% of the average pore diameter.
11. (currently amended) A cell according to Claim 1 2-or-4, in which the mesoporous structure of the cathode and/or anode has a hexagonal arrangement of pores that are continuous through the thickness of the electrode.
12. (original) A cell according to Claim 11, in which the hexagonal arrangement of pores has a pore periodicity in the range from 5 to 9 nm.
13. (currently amended) A cell according to Claim 1 2-or-4, in which the mesoporous structure of the cathode and/or anode is a film having a thickness in the range from 0.5 to 5 micrometers.
14. (currently amended) A cell according to Claim 1 2-or-4, in which the mesoporous structure of the cathode and/or anode has a cubic arrangement of pores that are continuous through the thickness of the electrode.
15. (original) A cell according to Claim 1, in which the titanium dioxide or lithium titanate is nanoparticulate.
16. (previously presented) A cell according to Claim 1, in which the anode comprises titanium dioxide.
17. (previously presented) A cell according to Claim 1, in which the anode comprises a lithium titanate.
18. (original) A cell according to Claim 17, in which the lithium titanate is  $\text{Li}_4\text{Ti}_5\text{O}_{12}$ .

19. (previously presented) A cell according to Claim 1, in which the electrolyte comprises an aqueous solution of lithium hydroxide.
20. (previously presented) A cell according to Claim 1, which is a battery.
21. (previously presented) A cell according to Claim 1, which is a supercapacitor.
22. (previously presented) A cell according to Claim 8, in which the mesoporous structure of the cathode and/or anode has a pore diameter within the range from 2.0 to 8.0 nm.
23. (previously presented) A cell according to Claim 9, in which the mesoporous structure of the cathode and/or anode has a pore number density of from  $1 \times 10^{12}$  to  $1 \times 10^{13}$  pores per  $\text{cm}^2$ .
24. (previously presented) A cell according to Claim 10, in which at least 85% of the pores in the mesoporous structure of the cathode and/or anode have pore diameters to within 10% of the average pore diameter.
25. (previously presented) A cell according to Claim 10, in which at least 85% of the pores in the mesoporous structure of the cathode and/or anode have pore diameters to within 5% of the average pore diameter.